A GENE-BASED PROGNOSTIC FOR HEPATOCELLULAR CARCINOMA PATIENT RESPONSE TO ADJUVANT TRANSCATHETER ARTERIAL CHEMOEMBOLIZATION

SUMMARY

The gold standard of care for hepatocellular carcinoma patients with intermediate- to locally advanced tumors is transcatheter arterial chemoembolization (TACE), a procedure whereby the tumor is targeted both with local chemotherapy and restriction of local blood supply. NCI scientists have identified a 14-gene signature predictive of response to TACE, and NCI seeks licensees or co-development partners to develop the technology toward commercialization.

REFERENCE NUMBER

E-101-2016

PRODUCT TYPE

- Diagnostics

KEYWORDS

- Prognostic, Hepatocellular Carcinoma, Gene-Expression Signature, Patient Stratification

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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DESCRIPTION OF TECHNOLOGY

Hepatocellular Carcinoma (HCC) is one of the most common cancers worldwide with largely unfavorable outcomes due to a lack of effective treatment options for patients in the later state of disease. The gold standard of care for HCC patients with intermediate to locally advanced tumors is transcatheter arterial chemoembolization (TACE), a procedure whereby the tumor is targeted both with local chemotherapy and restriction of local blood supply. TACE procedures are often not effective however, and a need exists to identify patients that will respond to TACE.

NCI scientists have identified a 14-gene signature predictive of response to TACE. This “TACE Navigator Gene Signature Assay” based on a Nanostring platform, is useful in identifying HCC patients in advance who will respond to and have the greatest survival benefit following TACE, and can identify patients who

need additional/alternative therapeutic modalities.

POTENTIAL COMMERCIAL APPLICATIONS

- Prognostic test for HCC patient response to TACE procedure
- Companion diagnostic for TACE procedure

COMPETITIVE ADVANTAGES

- First in class prognostic diagnostic for frontline therapy in highly prevalent HCC

INVENTOR(S)

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DEVELOPMENT STAGE

- Basic (Target Identification)

PATENT STATUS

- **U.S. Provisional:** US Provisional Application 62/292,789 (HHS Reference No. E-101-2016/0-US-01) filed February 8, 2016 entitled “GENE SIGNATURE PREDICTIVE OF HEPATOCELLULAR CARCINOMA RESPONSE TO TRANSCATHETER ARTERIAL CHEMOEMBOLIZATION (TACE)”

RELATED TECHNOLOGIES

- E-024-2009 - Gene Signature for Predicting Solid Tumors Patient Prognosis

THERAPEUTIC AREA

- Cancer/Neoplasm